FIXED-RATE BLOCK-BASED IMAGE COMPRESSION WITH INFERRED PIXEL VALUES

ABSTRACT OF THE DISCLOSURE

[0108]   An image processing system including an image encoder and image decoding system is provided. The image encoder system includes an image decomposer, a block encoder, and an encoded image composer. The image decomposer decomposes the image into blocks. The block encoder which includes a selection module, a codeword generation module and a construction module, processes the blocks. Specifically, the selection module computes a set of parameters from image data values of a set of image elements in the image block. The codeword generation module generates codewords which the construction module uses to derive a set of quantized image data values. The construction module then maps each of the image element's original image data values to an index to one of the derived image data values. The image decoding system reverses this process to reorder decompressed image blocks in an output data file.